

Appendix B

Construction Specification

A-E Construction Specification

PROJECT FILE NO. 23299

CFA-04 Mercury Pond

Prepared for:
U.S. Department of Energy
Idaho Operations Office
Idaho Falls, Idaho

DOCUMENT MANAGEMENT CONTROL SYSTEM (DMCS)

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SIGNATURES

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RECORDS MANAGEMENT

10. Is this a Construction Specification? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		11. NCR Related? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
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<p>15. Uniform File Code: <u>6102</u></p> <p>16. Disposition Authority: <u>ENV1-h-1</u></p> <p>17. For QA Records Classification Only: Lifetime <input type="checkbox"/>, Nonpermanent <input type="checkbox"/>, Permanent <input checked="" type="checkbox"/></p> <p>Item or activity to which the QA Records apply: _____</p> <p>18. Periodic Review Frequency: N/A <input checked="" type="checkbox"/>, 5 years <input type="checkbox"/>, or Other _____</p>			<p>Cutoff at submission of the final financial status report for the site, or after resolution of all issues arising from litigation, claim, negotiation, audit, cost recovery, or other action, whichever is later. Destroy 10 years after cutoff with written approval from the EPA award official.</p>

CFA-04 MERCURY POND

The following sections of this specification were prepared under the direction of the Professional Engineer as indicated by the seal and signature provided on this page. The Professional Engineer is registered in the State of Idaho to practice Civil Engineering.

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01005 Summary of Work
01051 Construction Surveying and Staking
01300 Submittals

Division 2 – Site Work

02200 Earthwork
02486 Revegetation

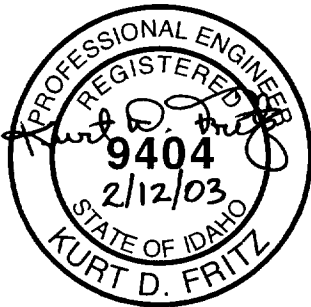


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ATTACHMENTS:

VENDOR DATA SCHEDULE
SCHEDULE X

Project Title: **CFA-04 Mercury Pond**
Section Title: **Summary of Work**
Revision Number: 0

Project Number: 23299
Revision Date: 02/13/03

SECTION 01005--SUMMARY OF WORK

PART 1--GENERAL

SUMMARY:

The Subcontractor shall furnish plant, labor, material, equipment, and supplies (except government-furnished materials and/or equipment) and perform work and operations necessary to completely remediate the Central Facilities Area (CFA) -04 mercury pond in accordance with the subcontract drawings and these specifications.

Note: Special Conditions referenced herein will be prepared and provided during procurement.

Work Includes, but is not limited to:

- Removing the existing inner and outer perimeter fences.
- Mowing existing vegetation.
- Marking/identifying the soil contamination areas for excavation based on the drawings.
- Excavating soil that exceeds the mercury final remediation goal of 8.4 mg/kg identified herein as "Low-Level Hg."
- Transporting and disposing of soil that exceeds the mercury final remediation goal to the disposal location, as indicated in the Special Conditions.
- Excavating soil that exceeds the Resource Conservation and Recovery Act characteristic hazardous waste level of 0.2 mg/L identified herein as "Low-Level TCLP Hg."
- Transporting and disposing of soil that exceeds the Resource Conservation and Recovery Act characteristic hazardous waste level to the disposal location, as indicated in the Special Conditions.
- Excavating and disposing of asbestos-containing roofing material and other construction debris, including basalt rubble, rebar, and gravel. The disposal location shall be as indicated in the Special Conditions.
- Backfilling and grading areas that have been excavated with uncontaminated soil to preconstruction grade. All excavated areas will be contoured to match the surrounding terrain.
- Finish grading and revegetating the identified areas.
- Performing a topographical survey of the CFA-04 site, including the final disturbed surface.

Project Title: **CFA-04 Mercury Pond**
Section Title: **Summary of Work**
Revision Number: 0

Project Number: 23299
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REFERENCES:

The following documents, including others referenced therein, form part of this section to the extent designated herein.

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910	"Occupational Safety and Health Standards"
29 CFR 1926	"Safety and Health Regulations for Construction"
40 CFR 261	"Identification and Listing of Hazardous Waste"
40 CFR 300	"National Oil and Hazardous Substances Pollution Contingency Plan"
10 CFR 830, Subpart A	"Quality Assurance Requirements"
10 CFR 835	"Occupational Radiation Protection"

BECHTEL BWXT, IDAHO (BBWI)

Subcontractor Requirements Manual
Health and Safety Plan for the CFA-04 Mercury Pond Sampling and Remedial Action
(INEEL/EXT-02-00528)

Unless otherwise specified, references in these specifications or on the subcontract drawings to other specifications, codes, standards, or manuals that are part of these specifications, but not included herein, shall be the latest edition, including any amendments and revisions, in effect as of the date of this specification.

SUBMITTALS:

See Section 01300, "Submittals," and the Vendor Data Schedule for submittal requirements.

QUALITY ASSURANCE:

Quality Assurance Program requirements shall exist to ensure that work performed is in conformance with the requirements established by the drawings and this specification.

Quality Assurance Program criteria applicable to this scope of work are addressed in the General Provisions, the Special Conditions, these specifications, and the BBWI *Subcontractor Requirements Manual*.

Standard Products: The materials and equipment furnished by the Subcontractor shall be standard products of manufacturers regularly engaged in the production of the type of materials and equipment required and shall be of the manufacturer's latest standard designs.

Project Title: **CFA-04 Mercury Pond**
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1 **SAFETY, HEALTH, AND ENVIRONMENT:**

2
3 In general, work shall be in compliance with the applicable sections of 29 CFR 1910,
4 29 CFR 1926, the *Health and Safety Plan for the CFA-04 Mercury Pond Sampling and*
5 *Remedial Action*, and the *BBWI Subcontractor Requirements Manual*.

6
7 **DELIVERY, STORAGE, AND HANDLING:**

8
9 All packaged materials shall be delivered to the site in the original, unopened packages with
10 labels intact. Upon arrival, the Subcontractor shall inspect the materials or equipment for
11 damage.

12
13 **PART 2--PRODUCTS**

14
15 **MATERIALS:**

16
17 **Government-Furnished Materials:** Items shown on the subcontract documents as
18 government-furnished equipment (GFE) are materials and/or equipment furnished by the U.S.
19 Government to be installed by the Subcontractor. A complete and composite list of such
20 material is attached to the Subcontract Specifications and is referred to as the Schedule "X"
21 list.

22
23 **Hazardous Chemicals and Substances:** The Subcontractor shall comply with applicable
24 requirements of 29 CFR 1926.59, "Hazard Communication."

25
26 **PART 3--EXECUTION**

27
28 **CONSTRUCTION AND INSTALLATION:**

29
30 **General:** Materials and equipment shall be erected or installed only by qualified personnel
31 who are regularly engaged in the trades required to complete the work. The subcontract
32 drawings show the general arrangement of the excavations specified. Work shall be done in a
33 skillful and workmanlike manner.

34
35 **Coordination of Work:** Where new work and existing facilities are shown on the drawings,
36 but are not located precisely by dimensions, the Subcontractor shall be responsible for proper
37 location and clearances and for correcting discrepancies and interferences in the work that are
38 a result of the Subcontractor's operations. Work done by one trade that must be integrated
39 with work of other trades shall be laid out with due regard to the work done, or to be done, by
40 other trades; particularly if the work done by one trade depends on completion or proper
41 installation of work done by other trades. The Subcontractor shall cooperate in coordinating
42 his work with work being done by others if their work must be integrated with the
43
44

Project Title: **CFA-04 Mercury Pond**
Section Title: **Summary of Work**
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- 1
- 2 Subcontractor's work. The Subcontractor shall notify the Contractor at least 1 week prior to
- 3 starting of the date on which the Subcontractor proposes to proceed with the work.
- 4
- 5 END OF SECTION 01005

Project Title: **CFA-04 Mercury Pond**
Section Title: **Construction Surveying and
Staking**

Project Number: 23299

Revision Number: 0

Revision Date: 02/13/03

1 SECTION 01051--CONSTRUCTION SURVEYING AND STAKING

2
3 PART 1--GENERAL

4
5 SUMMARY:

6
7 Section Includes: Work includes, but is not limited to:

8
9 The Subcontractor shall furnish all materials, labor, tools, and equipment to perform all
10 surveying necessary to layout and control the construction work. The Subcontractor shall
11 perform surveying to establish the excavation boundaries and perform topographic surveys as
12 set forth in these specifications and the design drawings. The Subcontractor may perform the
13 surveying, or an independent survey firm, provided the work is performed under the
14 supervision of a Registered Land Surveyor in the State of Idaho.

15
16 The Contractor will provide survey coordinates for the excavation boundary zones, as shown
17 on the drawings. The Subcontractor shall survey and mark the excavation boundary prior to
18 commencement of excavation.

19
20 SUBMITTALS:

21
22 Submittals include, but are not limited to, the following:

23
24 Certification: Submit certification that the land surveyor is a Registered Professional Land
25 Surveyor licensed in the State of Idaho.

26
27 Topographical Survey: Electronic data shall be reduced and plotted by the Subcontractor in
28 standard ASCII and Autocad 14 format. Electronic data shall be submitted on electronic
29 media such as CD or Zip Disk. Legible notes, drawings, and electronic data files (including
30 point number, northing, easting, elevation, and point description) shall be submitted to the
31 Contractor for approval. All surveys shall be conducted using the established project datum.
32 Required surveys shall consist of:

- 33
34 1) Topographical survey of the final surface of the entire CFA-04 site, including
35 all disturbed areas and a topographical map of the area with a contour interval
36 of 1 ft. At a minimum, the topographic survey shall define all grade breaks,
37 swales, and other natural features with sufficient detail to define the finished
38 grade. In areas where the terrain is relatively flat, a grid of no greater than 50
39 ft. in all directions shall be used. The limits of the survey shall include all
40 areas disturbed during construction, including the entire area within the outer
41 perimeter fence.

42
43 See Section 01300, "Submittals," and the Vendor Data Schedule for additional requirements.

Project Title: **CFA-04 Mercury Pond**
Section Title: **Construction Surveying and Staking**
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QUALITY CONTROL:

Qualifications: Construction surveying and staking shall be accomplished under the direction of a Registered Professional Land Surveyor.

PART 2--PRODUCTS

Stakes: Identification stakes or hubs shall be of sufficient length, width, and depth to provide a solid set in the ground and to provide space for marking above ground, when applicable. The top 2 in. of all slope, guard, reference, clearing, and structure stakes shall be painted or marked with plastic flagging.

PART 3--EXECUTION

SURVEY REQUIREMENTS:

Accuracy: Optical survey, tape measurement, and electronic measurements shall have a minimum accuracy of ± 0.1 ft in horizontal locations and ± 0.05 ft in elevations.

Project Datum: Horizontal coordinates are based on NAD27 Idaho East Zone State Plane. Vertical datum is NGVD29. All surveying for the project construction shall be based on this datum. The Subcontractor shall verify and establish survey control inside the work area prior to commencement of construction work.

Excavation Zone Reference Stakes: Excavation limit stakes shall be established. The position of these stakes shall be determined by methods that will produce on the ground the Precision Level shown in Table 1. The excavation limit shall be located on the ground and marked with lath, flagging, or other methods approved by the Contractor's Representative.

Table 1. Precision level.

Item	Precision
Horizontal accuracy for excavation limits. In feet or percentage of horizontal distance measured from transverse line, whichever is greater.	0.2 ft or 1.0%

Monuments of Property Boundaries or Surveys of Other Agencies: If property boundary or survey monuments, or survey markers of other agencies, are found within or adjacent to the construction limits, the Subcontractor shall immediately notify the Contractor's Representative. These monuments shall not be disturbed.

Project Title: **CFA-04 Mercury Pond**
Section Title: **Construction Surveying and
Staking**
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1

2 FIELD QUALITY CONTROL:

3

4 The Contractor's Representative will perform surveillance to verify compliance of the work
5 to the drawings and specifications.

6

7 END OF SECTION 01051

Project Title: **CFA-04 Mercury Pond**
Section Title: **Submittals**
Revision Number: 0

Project Number: 23299
Revision Date: 02/13/03

1 SECTION 01300--SUBMITTALS

2
3 PART 1--GENERAL

4
5 SUMMARY:

6
7 This section specifies the administrative, technical, and quality requirements for vendor data
8 submittals. Vendor data requirements are specified in individual specification sections or on
9 the drawings and are tabularized on a Vendor Data Schedule. In the event of conflicting
10 requirements, the submittal requirements prescribed in the individual specification section
11 shall take top priority, the drawings second, and the vendor data schedule last.

12
13 The Subcontractor shall submit data, drawings, and other submittals specified. If the
14 Contractor determines the Subcontractor's submittal to be incomplete or unacceptable, the
15 Subcontractor shall make a complete and acceptable submittal to the Contractor by the
16 second submission of a submittal item.

17
18 The Subcontractor shall be responsible for providing submittals in accordance with the
19 Subcontract General Provisions document, providing submittals with adequate time for
20 review and resubmittal, and advising the Contractor of any submittal that might be delayed
21 and that might, if further delayed, extend completion of the project.

22
23 Section Includes, but is not limited to: The preparation, transmittal, and delivery of
24 documents by the Subcontractor to the Contractor as required in the "Submittals" subdivision
25 of the specification sections and as provided on the Vendor Data Schedule.

26
27 Related Sections: General Provisions, *Subcontractor Requirements Manual*, Special
28 Conditions, Drawings, Vendor Data Schedule, and other sections of these specifications
29 apply to this section.

30
31 REFERENCES:

32
33 The following documents, including others referenced therein, form part of this section to the
34 extent designated herein:

35
36 AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
37 ANSI Y14.1 Drawing Sheet Size and Format

38
39 SUBMITTALS:

40
41 General Procedures: Vendor data, whether prepared by the Subcontractor or Subcontractor's
42 subtier or supplier, shall be submitted as instruments of the Subcontractor. Therefore, prior to
43 submittal, the Subcontractor shall ascertain that material and equipment covered by the
44

Project Title: **CFA-04 Mercury Pond**
Section Title: **Submittals**
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1 submittal and the contents of the submittal itself meet all the requirements of the subcontract
2 specifications, drawings, or other contract documents.

3
4 Each submittal shall contain identification for each separable and separate piece of material
5 or equipment and literature with respect to the information provided in the specification and
6 on the Vendor Data Schedule. Submittals shall be numbered consecutively for each different
7 submittal.

8
9 Vendor Data Schedule: Vendor data required by the specification sections or the drawings to
10 support design, construction, and operation of the project are identified on a Vendor Data
11 Schedule. The Vendor Data Schedule provides a tabular listing by item number, drawing or
12 specification reference, and description of the item or service. The type of submittal is
13 identified by a "Vendor Data Code," and the time required to submit the item is identified by
14 a "When to Submit" code. An "Approval" code specifies whether the submittal is for
15 Mandatory Approval or for Information Only. One copy of routine paper or electronic file
16 submittals is required; additional copies may be required by the Vendor Data Schedule.
17 Electronic file submittals are preferred. Submittals that cannot be scanned or provided
18 electronically, such as large shop drawings, will require six copies for Mandatory Approval
19 and four copies for Information Only. Material or color samples will require two sets for
20 Mandatory Approval and one set for Information Only.

21
22 Vendor Data Transmittal and Disposition Form 431.13: All vendor data shall be submitted to
23 the Contractor using the Vendor Data Transmittal and Disposition Form. The form provides
24 the Subcontractor a method to submit vendor data and provides the Contractor a means of
25 dispositioning the submittal. The Subcontractor shall list the Vendor Data Schedule item
26 number, a Vendor Data Transmittal tracking number (if applicable), the drawing or
27 specification number reference, a Tag Number (if applicable), the submittal status (e.g.,
28 Mandatory Approval, Information Only, Re-submittal, or Or-equal), the revision level, and
29 the item description. The description should be complete enough that a person unfamiliar
30 with the project can determine what the submittal includes.

31
32 Disposition by the Contractor: The Contractor's comments and required action by the
33 Subcontractor will be indicated by a disposition code on the submittal. The disposition codes
34 will be classed as follows:

- 35
36 (A) "Work May Proceed." Submittals so noted generally will be classed as data that
37 appear to be satisfactory without corrections.
38
39 (B) "Work May Proceed with Comments Incorporated. Revise Affected Sections and
40 Resubmit Entire Submittal." This category will cover data that, with the
41 correction of comments noted or marked on the submittal, appear to be
42 satisfactory and require no further review by the Contractor prior to construction.
43
44

Project Title: **CFA-04 Mercury Pond**
Section Title: **Submittals**
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(C) "Work May NOT Proceed. Revise and Resubmit." Submittals so dispositioned will require a corrected resubmittal for one of the following reasons:

- 1) Submittal requires corrections, per comments, prior to final review
- 2) Submittal data are incomplete and require more detailed information prior to final review
- 3) Submittal data do not meet Subcontract document requirements.

(D) "Accepted for Use. Information Only Submittal." Submittals so dispositioned generally will be classified as Information Only for as-specified material and equipment.

Mandatory Approval-coded vendor data will be reviewed by the Contractor and receive an A, B, or C disposition. Information Only submittals without comments will receive a D disposition. All dispositioned submittals will be returned to the Subcontractor. The Contractor may provide internal review of Information Only submittals. In the event that comments are generated on an Information Only submittal, the submittal may be dispositioned B or C and returned to the Subcontractor for appropriate action. Acknowledgment of receipt of dispositioned vendor data by the Subcontractor will not be required.

The Contractor will return dispositioned submittals with reasonable promptness. The Subcontractor shall note that a prompt review is dependent on timely and complete submittals in strict accordance with these instructions.

PART 2--PRODUCTS (SUBMITTAL REQUIREMENTS)

PLAN SUBMITTAL INSTRUCTIONS:

Construction or other identified plan instructions shall be provided where specifically required by other sections. Instructions shall be clear, concise, and detailed and shall utilize drawings and pictures to the extent necessary. The instructions shall include procedures for handling and preparation of supporting work, assembly, and incorporation of the material/equipment into the work. The instructions shall include sequences, precautions, and tolerances.

In general, the Contractor's Representative will inspect the work to the criteria and instructions prescribed in the Subcontractor's plan instructions. The Subcontractor shall not deviate from the written instructions without prior written approval and direction from the Contractor.

Project Title: **CFA-04 Mercury Pond**
Section Title: **Submittals**
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1 DRAWINGS:

2
3 The following additional submittals shall be required, as indicated on the Vendor Data
4 Schedule:

5
6 "Redline" Drawings: Copies of the construction drawings shall be updated to include
7 all changes or modifications made during construction and to reflect the actual
8 conditions of construction. Each drawing shall be marked "As-Built," signed by the
9 Subcontractor Representative, and be suitable for XEROX copying or microfilming.

10
11 PART 3--EXECUTION (NOT APPLICABLE)

12
13 END OF SECTION 01300

Project Title: **CFA-04 Mercury Pond**
Section Title: **Earthwork**
Revision Number: 0

Project Number: 23299
Revision Date: 02/13/03

SECTION 02200--EARTHWORK

PART 1--GENERAL

SUMMARY:

Section Includes, but is not limited to:

1. Removing the inner and outer perimeter fences
2. Mowing vegetation, as required
3. Excavating and disposing of all materials encountered, of every description, for completion of the Subcontract as shown on the drawings and as specified herein
4. Performing dust control
5. Backfilling and grading all excavations
6. Compacting all backfill as specified herein
7. Finish grading and grading for surface drainage.

REFERENCES:

The following documents, including others referenced therein, form part of this section to the extent designated herein.

AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS
(AASHTO)

- | | |
|-------------|----------------------------------------------------------------------------------------------------------------------|
| AASHTO | “Standard Specifications for Transportation Materials and Methods of Sampling and Testing” |
| AASHTO M145 | “Recommended Practice for the Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes” |
| AASHTO T11 | “Standard Method of Test for Materials Finer Than 75 Micrometer (No. 200) Sieve in Mineral Aggregates by Washing” |
| AASHTO T27 | “Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates” |
| AASHTO T99 | “Standard Method of Test for the Moisture-Density Relations of Soils Using a 5.5 lb Rammer and a 12 in. Drop” |
| AASHTO T238 | “Standard Method of Test for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)” |

CODE OF FEDERAL REGULATIONS (CFR)

- | | |
|-------------|----------------------------------------------------------------------------|
| 29 CFR 1926 | “Safety and Health Regulations for Construction,” Subpart P, “Excavations” |
| 10 CFR 835 | “Occupational Radiation Protection” |

Project Title: **CFA-04 Mercury Pond**
Section Title: **Earthwork**
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1 IDAHO TRANSPORTATION DEPARTMENT (ITD)
2 SSHC "Standard Specification for Highway Construction"

3
4 BECHTEL BWXT, IDAHO (BBWI)
5 *Health and Safety Plan for the CFA-04 Mercury Pond Sampling and Remedial Action*
6 *(INEEL/EXT-02-00528)*

7
8 *Subcontractor Requirements Manual*
9

10 SUBMITTALS:

11
12 Submittals include, but are not limited to, the following:

13
14 Construction Work Plan: The Subcontractor shall submit for Contractor approval a work
15 plan detailing the following:

- 16
17
 - 18 • Methods and equipment for excavation, basalt cleaning, and dust control
 - 19 • Sequence of operations
 - 20 • Construction details of the work platform for sealing truck liners and details of the
21 method for sealing liners prior to exit from the construction site
 - 22 • Methods for controlling excavation depth.

23 See Section 01300, "Submittals," and the Vendor Data Schedule for additional submittal
24 requirements.

25
26 PART 2--PRODUCTS

27
28 MATERIALS AND EQUIPMENT:

29
30 Satisfactory Soil Materials: Satisfactory soil materials are defined as those complying with
31 AASHTO M145, soil classification Groups A-1, A-2-4, and A-2-5.

32
33 Unsatisfactory Soil Materials: Unsatisfactory soil materials are those defined in AASHTO
34 M145 soil classification Groups A-2-6, A-2-7, A-4, A-5, A-6, and A-7; also peat and other
35 highly organic soils.

36
37 Backfill and Fill Material: "Satisfactory" soil materials free of clay, rock, gravel larger than
38 3 in. in any dimension, debris, waste, frozen materials, vegetable, and other deleterious
39 matter. Select pit run gravel is available at the CFA gravel pit. Gravel pit material and use of
40 the gravel pits shall be at no cost to the Subcontractor. Upon completion of operations
41 involving gravel pit material removal, the Subcontractor shall grade and reshape the disturbed
42 areas. Sloped surfaces shall meet the requirements of 29 CFR 1926, "Safety and Health
43 Regulations for Construction."

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Section Title: **Earthwork**
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Equipment: All equipment and tools used by the Subcontractor to perform the work shall be subject to inspection by the Contractor before the work is started and shall be maintained in satisfactory working condition at all times. The Subcontractor's equipment shall have the capability to perform the indicated work specified herein.

Because of the potential for contamination, all equipment brought to the site slated for work in the contamination zone shall be identified to the Contractor prior to delivery and shall be clean and free of grease and oil spots (where applicable), and tires will be in a like-new condition, free of slits and cracks. The Contractor reserves the right to reject equipment not meeting these standards.

The Subcontractor shall ensure that all equipment used for clearing vegetation or earthwork is fitted with appropriate safety devices that comply with all applicable federal laws and the *Health and Safety Plan for the CFA-04 Mercury Pond Sampling and Remedial Action* and adequately protect the operator and minimize exposure of workers and others to potentially contaminated material.

PART 3--EXECUTION

The existing fences shall be removed prior to excavation activities, as indicated on the drawings. The Subcontractor shall be responsible for determining the method of excavation to be used for each of the areas identified on the drawings. The excavation method shall be submitted in the Construction Work Plan for Contractor approval.

Soil samples collected from the pond inlet area of the CFA-04 site revealed the following constituents that exceeded background concentrations for the Idaho National Engineering and Environmental Laboratory: aluminum, arsenic, barium, cadmium, calcium, chromium, cobalt, lead, magnesium, mercury, nickel, Cs-137, Pa-234m, Sr-90, Th-234, U-234, U-235, and U-238. Aroclor-1254 also was detected at low levels.

FENCE REMOVAL:

Remove existing fences as shown on the drawings. The inner fence consists of T-bar posts and two wire strands. The outer perimeter fence consists of 6-ft-high chain-link fence fabric, gates, and hardware. All chain-link fence fabric, gates, and all usable hardware shall be salvaged for Contractor excess. Posts shall be completely removed from the ground and disposed of as indicated in the Special Conditions. Holes left from post removal shall be completely backfilled.

DUST CONTROL:

During all work activities performed under this contract, the Subcontractor shall minimize the creation and emission of dust in accordance with Idaho Administrative Procedures Act

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(IDAPA) Standards 58.01.01.650 and 58.01.01.651. This shall be accomplished by the use of water trucks and visual observation. Water-based dust-control additives may be used with the approval of the Contractor. The Subcontractor shall control the amount of water used so as not to create flowing water. The source of water for dust suppression will be specified in the Special Conditions.

Unless otherwise stated, the Subcontractor shall contain and cover all excavated soil and asbestos-containing materials by the use of liners during transport to the disposal location as indicated in the Special Conditions. The liner system or "burrito bag" shall fully enclose the soil and protect the truck bed on all sides from contact with the soil. The liners shall be 6-mil (minimum) black polyethylene with formed corners, auto ignition no less than 650°F, and flash point no less than 600°F. Possible supplier is Packaging Research & Design—telephone: (800) 833-9364. Liners shall be thermally sealed to fully contain the waste prior to exit from the construction site. The Subcontractor shall construct a personnel platform for use during sealing of the burrito bags. The platform shall allow for a stable, flat working surface constructed of timber, scaffolding, or similar. Scaffolding systems shall be in accordance with the requirements of Program Requirements Document (PRD) -2004, "Scaffolding," as identified in the *Subcontractor Requirements Manual*. The use of stepladders is not acceptable.

Preoperational Test: The Subcontractor will prepare and transport a load of clean soil obtained from the CFA gravel pit prior to initiating soil removal activities. The transport vehicle must have a sealed lining system of the type that will be used during the removal action to protect the vehicle and the environment from being contaminated by the excavated soil. The test load will be transported from the gravel pit and will travel at least 5 mi at a maximum speed of 55 mph (or lesser speed if proposed by the Subcontractor as a maximum hauling speed). Then, the load will be unloaded at the CFA gravel pit as if it were contaminated soil. During the test run, the Contractor, Radiological Control Technician, and Environmental, Safety, and Health Representative will visually evaluate the operation to determine if any soil is released. If it is determined that the liner system does not adequately contain the soil during transport, modifications shall be made and the test repeated.

EXCAVATION:

Mowing Surface Vegetation: This work shall consist of mowing or brush hogging (or similar approved methods) of all weeds, grass, brush, and shrubs from within the boundaries of the zones requiring excavation, as shown on the drawings and in accordance with these specifications. Mowing shall remove vegetation to as close to the ground surface as practicable and reduce the size of the vegetation to particles as small as practicable. Mowed vegetation shall be evenly distributed across the boundaries of the excavation zone. Care shall be taken to keep the mowed vegetation particles inside the area to be excavated.

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1 Stockpiling: Unless otherwise identified, stockpiles of contaminated soil shall be securely
2 covered with 8 mil of Visqueen at the end of each workday.

3
4 General Soil Excavation Requirements: In all excavation locations shown on the drawings,
5 the Subcontractor shall contain excavation operations within the designated limits. If
6 conditions encountered warrant modification to the designated limits, the Contractor's
7 Representative shall be notified prior to work proceeding.

8
9 Excavations that expose basalt outcroppings are likely. Manual cleaning such as brooming or
10 vacuuming the basalt outcroppings may be required as outlined in this section.

11
12 Asbestos-Containing Material Roofing Material Excavation: Asbestos-containing material
13 roofing and commingled mercury-contaminated soil excavation include removal, as
14 identified on the drawings as Zone "11," and disposal as identified in the Special Conditions.
15 Upon completion of the initial excavation of asbestos-containing material, the Contractor will
16 visually inspect the area for any remaining asbestos-containing material. If Contractor
17 inspection indicates that complete asbestos-containing material removal has not been met, the
18 Contractor will identify the boundaries of any remaining asbestos-containing material for
19 Subcontractor removal.

20
21 It is possible, however unlikely, that bulk calcine will be discovered during asbestos-
22 containing material roofing removal; if this occurs, then the Subcontractor shall immediately
23 notify the Contractor's Representative.

24
25 Generally accepted excavation practices shall be used to excavate and remove the asbestos-
26 containing material. All removal activities shall be conducted using wet methods to minimize
27 fiber release to the surrounding environment. Thorough wetting of the soil shall occur
28 approximately 1 day prior to excavation. Surface spraying during excavation also shall be
29 used to mitigate dry soil dusts.

30
31 Although unlikely, if friable asbestos-containing material is detected during excavation
32 activities, the material shall be isolated and immediately brought to the attention of
33 Contractor's Representative. Operations may continue after appropriate controls are in place.
34 Friable asbestos removal will be conducted using wet methods to minimize fiber release to
35 the surrounding environment. These activities shall be conducted by hand using manual
36 equipment. Loose pieces of asbestos will be sprayed with amended water and placed into 6-
37 mil polyethylene asbestos disposal bags. After filling, the bags shall then be "double-bagged"
38 and "J" sealed with duct tape. Spray bottles, shovels, rakes, dustpans, etc. may be used to aid
39 in these activities.

40
41 Mercury-Contaminated Soil Excavation: Mercury-contaminated soil excavation includes
42 removal and disposal of soil identified on the drawings as contaminated with mercury. Upon
43 completion of the initial excavation of each identified contaminated soil zone, the Contractor

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will perform field screening to determine if the remedial action goals have been met. Pending the results of screening, the soil may be deemed clean, and no further excavation is required; or the soil may be deemed contaminated, and the Subcontractor shall continue excavating as identified by the Contractor. Field screening and identification of boundaries shall take approximately 2 days. This process shall continue until field screening indicates levels below the remedial action goals. Prior to backfilling and grading of the remediated zone, the Contractor will perform confirmation analytical sampling. The Subcontractor may mobilize to another soil contamination zone during the time for analytical sampling and analysis, which shall take approximately 5 weeks.

Mercury-contaminated soil identified on the drawings as "Low Level TCLP Hg" shall be excavated and transported to the disposal facility, as identified in the Special Conditions.

Mercury-contaminated soil identified on the drawings as "Low Level Hg" shall be excavated and transported to the disposal facility, as identified in the Special Conditions.

Debris Removal: Miscellaneous debris such as basalt rubble, lab bottles, concrete, and construction debris is located on the CFA-04 site. This debris may be encountered during excavation of the contaminated soil zones and shall be removed and disposed of with the commingled soil.

Existing Utilities: Utilities shall be identified by the Contractor and protected by the Subcontractor. The Subcontractor shall immediately notify the Contractor should any utilities be discovered during construction activities that are not shown on the drawings.

Rock Excavation: Rock excavation is not required.

Shoring and Bracing: The sides of all excavations shall be sloped or securely shored and braced in accordance with 29 CFR 1926, Subpart P and the *Subcontractor Requirements Manual*. A competent person shall inspect excavations in accordance with 29 CFR 1926, Subpart P and the *Subcontractor Requirements Manual*.

Control of Water: If water in the excavation is encountered, notify the Contractor's Representative immediately.

SOIL REMOVAL FROM BASALT OUTCROPPINGS:

Contaminated soil could be in contact with basalt outcroppings. The Subcontractor shall make every effort to remove contaminated soil from the rock outcroppings using methods including brooming and/or vacuuming. Contaminated soil shall be removed from basalt cracks to the extent practicable. Details of the proposed method shall be addressed in the Construction Work Plan submittal.

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1 **BACKFILLING AND GRADING:**

2
3 **General:** Backfill requirements are anticipated to vary. Excavations shall be cleared of all
4 trash and debris prior to backfilling. All backfill or fill material shall be free from trash,
5 organic matter, and frozen particles.

6
7 **Borrow:** Backfill material shall be select pit run gravel from the CFA gravel pit. Backfilling
8 with pit run gravel shall be used to within 6 in. from the original grade. The top 6 in. of
9 backfill material shall be from grading or "pulling" material from the surroundings to provide
10 "topsoil" for revegetating and matching the surrounding terrain.

11
12 **Placement:** Concentrated dumping of backfill material into excavations will not be
13 permitted. All material must be placed in uniform layers not to exceed 8 in. loose
14 measurement and brought up simultaneously. No water shall be used for placing, settling, or
15 compacting backfill or fill except to obtain optimum moisture content.

16
17 **Compaction:** Unless otherwise indicated on the drawings or specifications, compact all
18 backfill using two to three passes by mechanical devices such as rollers, vibratory
19 compactors, or mechanical tampers. Each 8-in. (maximum) loose measurement lift shall be
20 compacted before the next lift is placed thereon. Sections of backfill or fill failing to meet the
21 minimum compaction requirements shall be corrected prior to placement of subsequent lifts.

22
23 **Finish Grading:** Areas where the sides of the CFA-04 pond, including disturbed and
24 undisturbed walls of the pond, exceed a 4H:1V slope shall be graded to a smooth contour
25 (4H:1V maximum slope).

26
27 **EQUIPMENT:**

28
29 **Watering Equipment:** Provide water tank trucks capable of applying a uniform, unbroken
30 spread of water over the surface. A suitable device for positive shutoff and regulation of flow
31 shall be located to permit operation by the driver in the cab. Water trucks used for dust
32 suppression shall be labeled as "Non-Potable Water."

33
34 **DECONTAMINATION:**

35
36 Decontamination of all Subcontractor equipment or tools shall be performed in accordance
37 with the General Provisions (GP) Article GP-24. Decontamination activities will be
38 performed within the contamination areas. The Contractor will provide Radiological Control
39 Technician support when establishing these areas. All tools and equipment used for mercury
40 soil excavation will be decontaminated with dry methods using brooms, wire brushes, and
41 putty knives. Decontamination of asbestos removal equipment will be with methods utilizing
42 either low-volume, low-pressure water or with a high-efficiency particulate air vacuum.

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1 If the equipment used for mercury soil excavation has residual contamination after the initial
2 dry decontamination efforts, it shall be cleaned with low-volume, high-pressure water from a
3 portable spray unit. The tools and equipment to be cleaned will be isolated in the
4 decontamination pad. Any dry material and water used for decontamination efforts will be
5 collected and disposed of at an approved facility. All water used for decontamination must be
6 contained within the decontamination pad until such water can be transported to the disposal
7 facility for disposal. Upon completion of the removal action, the decontamination pad must
8 be size reduced, transported, and disposed of at an approved facility.

9
10 FIELD QUALITY CONTROL:

11
12 The Contractor's Representative will perform field surveillance to verify compliance of the
13 work to the drawings and specifications.

14
15 END OF SECTION 02200

Project Title: CFA-04 Mercury Pond
Section Title: Revegetation
Revision Number: 0

Project Number: 23299
Revision Date: 02/13/03

1 SECTION 02486--REVEGETATION

2
3 PART 1--GENERAL

4
5 SUMMARY:

6
7 Section Includes, but is not limited to, preparing seedbeds, sowing grasses, applying
8 fertilizer, and applying a GFE wood chip mulch to revegetate the CFA-04 site. The boundary
9 of the revegetation is the area contained by the outer perimeter fence as well as the dirt road
10 and firebreak surrounding the site. **Note: An additional area identified as the “trenches”**
11 **just east of the project site also shall be revegetated in accordance with this section.**

12
13 SUBMITTALS:

14
15 Submittals include, but are not limited to, the following:

16
17 Seed Mix Certification: Provide certification of the seed mixture composition and absence of
18 noxious weeds.

19
20 Results of Soil Fertilizer Analysis: Provide test results and recommendations for the fertilizer
21 type and application rate.

22
23 See Section 1300, “Submittals,” and the Vendor Data Schedule for additional submittal
24 requirements.

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Section Title: **Revegetation**
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PART 2--PRODUCTS

MATERIALS:

Seed Mix: Seed mix shall be free of noxious weeds and other deleterious materials. The following seed mix shall be used for all areas disturbed during the remedial action as well as the additional area west of the CFA-04 site:

SPECIES	RATE OF APPLICATION (lb/acre pure live seed)
"Secar" Bluebunch Wheatgrass (<i>Pseucloroegneria spicata</i>)	2
"Critanna" Thickspike Wheatgrass (<i>Elymus lanceolatus</i>)	2
Northern Sweetvetch (<i>Hedysarum boreale</i>)	1
"Sodar" Streambank Wheatgrass (<i>Elymus lanceolatus</i>)	2
Sandberg's Bluegrass (<i>Poa secunda</i>)	4
Scarlet Globemallow (<i>Sphaeralcea munroana</i>)	2
Total	13

Fertilizer: The Subcontractor shall perform a soil analysis of the soil at the CFA-04 site to determine the appropriate fertilizer mix and application rates for successful growth of the specified seed mix. All costs associated with the soil analysis and fertilizer requirements shall be included in the subcontract price.

Mulch: Mulch shall be processed wood chips supplied by the Contractor at no cost to the Subcontractor.

EQUIPMENT:

Seedbed Preparation: Disks, harrows, roller harrow-packers (culti-packers), tooth-type harrows, shovels, or other similar equipment.

Seeding and Fertilizing: Truax-type drill.

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Section Title: **Revegetation**
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1 PART 3--EXECUTION

2
3 Season of Work: Seeding shall be done between October 10 and November 30 or February 1
4 and March 20. Specific ideal seeding times within these windows shall be as required for
5 proper seedbed preparation.

6
7 Weed Control: Areas to be seeded shall be maintained reasonably free of weeds. Weeds shall
8 be kept from going to seed. Only weed-free equipment and vehicles will be allowed to enter
9 the project area.

10
11 Seedbed Preparation: Soil shall be tilled a minimum depth of 4 in. The seedbed shall be firm
12 below seeding depth and well pulverized and loose on top. The seedbed shall be free of clods
13 and weeds. Seedbed preparation shall not be performed when soil conditions are not suitable
14 for tilling: too dry, too wet, frozen, etc. Tillage shall produce cross-slope furrows on slopes.

15
16 On areas subject to severe erosion, the extent of seedbed preparation shall not exceed that
17 which can be seeded in 1 day.

18
19 Fertilizing: Fertilizing shall closely follow seedbed preparation. Fertilizer shall not be mixed
20 with seed. Fertilizer may be drilled or broadcast. Fertilizer shall be applied at a rate
21 determined by the soil analysis.

22
23 Seeding: Seeding shall closely follow fertilizing. If the seedbed has been disturbed, then the
24 Subcontractor shall prepare the seedbed again. Seeding work shall not proceed until the
25 seedbed has been inspected. Seeds shall be thoroughly mixed prior to application. Seeds shall
26 be uniformly applied at the previously specified rate. Seeds shall be buried 0.25 to 0.75 in.
27 Seeding shall not be performed when weather conditions are unfavorable: high wind, heavy
28 rain, etc.

29
30 Drilling shall maintain cross-slope furrows on slopes.

31
32 Mulching: The GFE wood chip mulch shall be spread uniformly at a rate of 15 to 17 tons per
33 acre. Mulching shall not be performed when wind interferes with mulch placement.

34
35 Protection: Traffic over seeded area shall be prohibited.

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1 FIELD QUALITY CONTROL:

2

3 Seedbed Inspection: Seeding shall not proceed until the Contractor's Representative has
4 inspected the seedbed for conformance to these specifications.

5

6 The Contractor's Representative will perform surveillance to verify compliance of the work
7 to the drawings and specifications.

8

9 END OF SECTION 02486

VENDOR DATA SCHEDULE

Project Title: CFA-04 Mercury Pond

Purchase Order / Work
Order / Subcontract No.: TBD

System Engineer /

Project Manager: Julie A. Sherwood

Date: 2/10/03

Rev.: 0

Vendor Data Coordinator Address: **TBD**

VENDOR DATA CODES

A. As-Built Drawings	K. Manufacturer's Data Report	U. Shop Drawings	AE. MSDS	AO – Design Qualification Testing
B. Assembly Drawings	L. O & M Manual	V. Survey Records	AF. Hardware Schedule	AP – Traceability Procedure
C. Attendance Record	M. Parts List	W. Test Procedure	AG. Specification	AQ – Cleaning Procedure
D. Blasting Plan	N. Piping Drawing	X. Special Processes	AH. Manufacturing/Inspection/Test Plan	AR – Weld Procedure Qualifications
E. Catalog Data	O. Procedure/Instructions	Y. Operational / CC Testing	AI. Test Certification	AS – Welder Performance Personnel Qualifications
F. Chem & Physical Analysis	P. Pump Head Curves	Z. Test Reports	AJ. Recommended Spares	AT – Non-Destructive Examination Personnel Certifications
G. Concrete Mix Design	Q. Personnel Qualifications	AA. UL/FM Listing	AK. Special Tools List	AU – Inspector Certifications
H. Control System Diagram	R. Red-line Drawings	AB. Warranty/Guarantee	AL. Certificate of Conformance	AV – Limited Shelf Life / Operational Data
I. Design Calculations	S. RSMI & Maintenance Log	AC. Weld Records	AM. Certificate of Disposal or Destruction	AW – Special Packaging, Shipping, and Rigging Procedure
J. Installation Instructions	T. Sample (Color, Texture, etc.)	AD. Wiring Diagrams	AN – Design Verification	AX – Certificate of Materials to ASME Code
				AY. Other

WHEN TO SUBMIT

AC - As Completed	BFA - Before Final Acceptance	PTP - Prior to Purchase	PTC - Prior to Construction Start	TS - Time of Shipment
AT - After Test	BFR - Before Fabrication Release	PS - Prior to Shipment	PTI - Prior to Installation	WP - With Proposal
BC - Before Contract Awarded	PDS - Prior to Delivery on Site	PT - Prior to Test	PTW - Prior to Welding	

[illegible]

Instructions:

1. Refer to subcontract documents for instructions on submittals.
2. Electronic submittals in lieu of paper documents are acceptable and encouraged.
- *3. The normal number of copies required is ONE. If more are required, the number will be shown here.
4. **THE INEEL WILL SCAN ALL SUBMITTED VENDOR DATA INTO A SYSTEM THAT IS ACCESSIBLE TO ALL INEEL EMPLOYEES UNLESS THE SUPPLIER/SUBCONTRACTOR IDENTIFIES SUBMITTED INFORMATION AS PROPRIETARY.**

SUBCONTRACT NO. S- (TBD)

SCHEDULE "X"

The Government will furnish to the Subcontractor at no cost the equipment or material listed below. The equipment or material may be obtained by the Subcontractor at the time he is ready to make the installation in accordance with the provisions of the contract.

The items will be available only during normal working hours, and a 24-hour minimum advance notice (Saturdays, Sundays, and holidays excluded) to the Subcontracting Officer will be required.

Transportation costs shall be the responsibility of the Subcontractor.

Item No.	Description	Location	Reference	Approximate Cost	Date Available
1.	Wood Chip Mulch	CFA	Specification 02486	No Cost	Award of Contract